NGA - National Geospatial-Intelligence Agency

Geospatial Intelligence Advancement Testbed

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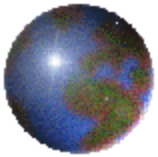
The Need

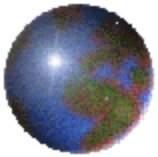
- Intelligence Community continues to experience imagery management and dissemination problems
  - Difficult to access/handle extremely large data sets
    - NTM, Spectral, MASINT (products), SAR, Motion
  - Inefficient approaches to get data to users
    - Especially for bandwidth constrained users
    - Must wait minutes (or hours) to start time-critical exploitation
  - Poor image quality at high compression ratios
  - Proprietary techniques and formats hinder interoperability
- Meanwhile, systems are required to deliver increasingly larger sets of imagery and geo-spatial data to an expanding group of users —
  the "TPED/TPPU" problem keeps growing

The Concept



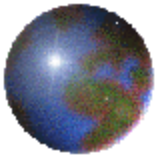
- A scaleable SCOTS capability enabling quick access and visualization of large images
  - Open-architecture / standards-based (NITFS/JPEG2000)
- Focus is on the analyst and warfighter:
  - Real-time, interactive dissemination and “on-demand” streaming for low-latency visualization of large data sets
  - Geospatial imagery and digital video imagery
  - Compliant to GeoScout and DCGS architectures / standards
- Ensuring image access throughout the enterprise [to the Last Tactical Mile]
  - Meets community defined image quality/NIIRS requirements
  - Comms-constrained users always able to access imagery, despite network and platform limitations
  - Ensuring right data is always available for users

Image Access Solutions (IAS)

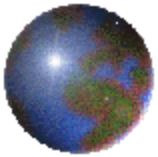


- Dramatically reduced time to access large images
  - Both locally and remotely
  - Even when communications bandwidth is constrained
- Reduced storage requirements (and costs)
- Improved image quality at higher compression ratios
- Standards-compliant architecture
- Compatibility with existing imagery sources
  - Extendable to support image libraries

NGA GIAT



- Sponsor:
  - NGA
    - Program Manager GIAT- LTC Ziobro
- Purpose:
  - GIAT provides a risk reduction prototype lab to optimize tech insertion into an operational environment
- NGA/GIAT sponsored activities:
  - Joint Expeditionary Force Experiment (JEFX) 2004
  - Horizontal Fusion Experiment 2004
  - Upstream Delivery Engineering Concept
  - IAS (IP) streamed over Radio (RF) Concept
  - Morning Calm
  - Combined Joint Task Force (CJTF) -7



- Joint Expeditionary Force Experiment (JEFX) 2004
- Purpose/Role:
  - JEFX 04 is a highly focused experiment that validates capabilities that can be rapidly transitioned to the warfighter upon completion of the experiment
  - Demonstrate IAS streaming imagery service from DGS-X (Langley AFB) to Nellis AFB
- Timeline:
  - SP III: 9-28 May 04
  - Main Experiment: 18 Jul - 7 Aug 04